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UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/870,965	05/31/2001	John Lacombe	1662-30400 JMH (P00-2943)	9110

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EXAMINER
PATEL, NITIN C

ART UNIT	PAPER NUMBER
2116	

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/870,965	LACOMBE ET AL.
	Examiner	Art Unit	
	Nitin C. Patel	2116	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *31 May 2005*.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-24* is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) *1-24* is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on *31 May 2001* is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All   b) ☐ Some * c) ☐ None of:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____.
   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   This is in responsive to request for continued examination filed on 31 May 2005.

2.   Claims 1 – 24 are pending with the application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   Claims 1 – 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Strothmann, US 5,815,144, and further in view of Azevedo et. al., US 6,496,890 B1.

4.   As to claims 1, 7, 14, and 21 Strothmann teaches a computer system [10, fig. 1a]

and method for reset with icon-based user configurable reset [user selective from

plurality of system management options: restart game, reset system, new cartridge, and

exit menu][col. 1, lines 63 – 67, col. 4, lines 1 – 15] comprising, a processor [30, CPU,

col. 3, lines 3 – 4], a system memory [33, col. 3, lines 41 – 43], input [16, input device]

/output device [16, output device] coupled [via 22, and 24] [col. 2, lines 48 – 65] to

processor [30, fig. 1A], an operating system [OS] with two protection levels [hardware

and software], a watchdog driver [watchdog timer], a computer application [game], user

configurable reset service that can be configured to reset the application without

resetting the OS, reset the OS, or perform restart of computer system [user selective

from plurality of system management options: restart game, reset system, new

cartridge, and exit menu][col. 1, lines 63 – 67, col. 4, lines 1 – 15], and watchdog driver

[watchdog timer] observes at least one application [game] for periodic message

[communication packets] from and initiated by application [game cartridge], and the I/O

coprocessor [36] interrupts the CPU [30] each time watchdog driver [watchdog timer]

expires [abstract, col. 1, lines 59 – 67, col. 2, lines 1 – 23, 48 – 60, col. 3, lines 1 – 13,

lines 41 – 42, col. 4, lines 28 – 67, col. 5, lines 1 – 7, col. 6, lines 12 – 67, col. 7, lines 1

– 14, col. 11, lines 11 – 67, col. 12, lines 1 – 61].

However, Strothmann does not teach explicitly watchdog driver to instructs the

reset service to initiate a reset procedure to reset the application without resetting the

OS.

Azevedo teaches a system and method for bus hang prevention and recovery for

data processing system with shared bus interface with multiple bus masters including a

hang prevention device [90] with device driver [col. 8, lines 7 – 14] which controls and

monitors the hang prevention device [90] signals, reset and reinitialize the adapter

circuitry [5], via cleared shared bus and after reset, the timer is reinitiated and the

subsystem waits for access to or from an external system within computer system

[abstract, col. 2, lines 48 – 67, col. 3, lines 1 – 45, col. 4, lines 45 –59, col. 7, lines 49 – 67, col. 8, lines 1 – 67, col. 9, lines 12 – 45, fig. 1].

It would have been obvious to one of ordinary skill in art, having the teachings of Strothmann and Azevedo before him at the time of invention was made, to modify watchdog timer in icon based user configurable reset of computer system as disclosed by Strothmann to include a hang prevention device including a device driver which controls and monitors the hang operation including reset and reinitialize the adapter without resetting the OS as taught by Azevedo, in order to obtain the data processing system with faster and more efficient means for shared bus hang prevention and control software recovery method without the loss of information on either transferring data and /or error condition [col. 7, lines 38 – 67, col. 2, lines 41 – 59, fig. 1].

5.   As to claim 2, Azevedo teaches a computer system [fig. 1] with a message passing interface [shared bus] to transmit signals between the two protection levels [hardware and software], wherein the watchdog driver executes in one protection level and the application executes in another protection level and wherein the periodic message is transmitted from the application to the watchdog driver through the message passing [data transfer] interface [col. 7, lines 49 – 67, col. 8, lines 1 – 24, fig. 1 – 2].

6.   As to claims 3, and 15, Azevedo teaches the message passing interface [shared bus] is a shared memory [20, central shared memory] queue [col. 3, lines 34 – 45, col. 6, lines 1 – 10, col. 7, lines 49 - 56].

7.   As to claims 4 – 5, and 22 – 23, Strothmann teaches reset service [system management menu] to close and restart the application upon receiving instruction to initiate the restart procedure [col. 2, lines 1 – 15].

8.   As to claims 6, and 24, Azevedo teaches the watchdog driver [device driver] to establish timer [92, timer] events when predetermined period of time has expired [timed-out occurs][col. 7, lines 49 – 52, col. 8, lines 1 – 15].

9.   As to claim 8, Strothmann teaches if system thread does receives a message from one of said applications [programs], the time event corresponding to said application is updated to reflect time plus the allotted period of time [50 ms timer] [col. 4, lines 28 – 50].

10.   As to claim 9, Strothmann teaches that the messages [packets] from said application are sent periodically [every 50 seconds] by applications [program] and directed specifically to watchdog driver [watchdog timer] [col. 4, lines 28 – 50].

11.   As to claim 10, Strothmann teaches a message passing interface [32, A/V controller/coprocessor, 36 I/O coprocessor] between the user mode and kernel mode [col. 1, lines 61 – 67, col. 2, lines 1 – 15].

12.   As to claim 11, Azevedo teaches application watchdog [290, hang prevention device with watchdog] which monitors shared bus [200] structure with multiple bus masters [202] including recovery of the subsystem by reset, user notification, error logging [col. 10, lines 8 – 63].

13.   As to claim 12, Azevedo teaches plurality of applications [bus adapters], bus masters, and bus arbiter [204] including priority request [col. 10, lines 21 – 40].

14.   As to claim 13, Strothmann teaches the restart service [system management menu] configured to perform a system reset [col. 2, lines 10 – 12].

15.   As to claims 16 – 18, Azevedo teaches a computer system [fig. 1] with a message passing interface [shared bus] to transmit signals between the two protection levels [hardware and software], wherein the watchdog driver executes in one protection level and the application executes in another protection level and wherein the periodic message is transmitted from the application to the watchdog driver through the message passing [data transfer] interface [col. 7, lines 49 – 67, col. 8, lines 1 – 24, fig. 1 – 2] therefore, he teaches different interface arrangement, method and protocols too.

16.   As to claims 19, and 20 Azevedo teaches the watchdog driver [device driver] to establish timer [92, timer] events when predetermined period of time has expired [timed-out occurs] and resetting of timer events [col. 7, lines 49 – 52, col. 8, lines 1 – 15, col. 9, lines 24 - 45].

17.   **Examiner's note**: Examiner has cited particular columns and line numbers in the references as applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

18.   **Prior Art not relied upon**: Please refer to the references listed in attached PTO-
892, which, are not relied upon for claim rejection since these references are relevant to
the claimed invention.

19.   Applicant's arguments with respect to claims 1 - 24 have been considered but are
moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the
examiner should be directed to Nitin C. Patel whose telephone number is 571-272-
3675. The examiner can normally be reached on 6:45 am - 5:15 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's
supervisor, Lynne H. Browne can be reached on 571-272-3670. The fax phone number
for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the
Patent Application Information Retrieval (PAIR) system. Status information for
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you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

LYNNE H. BROWNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Nitin C. Patel
June 29, 2005